

Brooklawn Memorial Park)	DEPARTMENTAL
Cumberland County)	FINDING OF FACT AND ORDER
Portland, Maine)	AIR EMISSION LICENSE
A-48-71-I-R)	

After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Brooklawn Memorial Park (Brooklawn) of Portland, Maine has applied to renew their Air Emission License, permitting the operation of four Class IVA (crematory) incinerators. Brooklawn's Air Emission License #A-48-71-G-R was issued on February 12, 1999, and was amended (A-48-71-H-A) on September 6, 2000 to add incinerator Unit 4 to the License.

B. Emission Equipment

Units 1 and 2 are Model IE43-PP Power-Pak cremator units, each with the following specifications:

Class Incinerator	IVA
Number of Chambers	2
Type of Waste	Type 4
Max. Design Combustion Rate (lb/hr)	150
Max. Actual Feed Rate	300 lb per batch
Auxiliary Fuel Input	
Primary Chamber (MMBtu/hr)	0.75 Natural Gas
Secondary Chamber (MMBtu/hr)	0.85 Natural Gas
Emissions Control	Afterburner

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Units 3 and 4 are Model IE43-SPP Super Power-Pak cremator units with the following specifications:

Class Incinerator	IVA
Number of Chambers	2
Type of Waste	Type 4
Max. Design Combustion Rate (lb/hr)	200
Max. Actual Feed Rate	800 lb per batch
Auxiliary Fuel Input	
Primary Chamber (MMBtu/hr)	1.5 Natural Gas
Secondary Chamber (MMBtu/hr)	1.5 Natural Gas
Emissions Control	Afterburner

The incinerators are equipped with non-specification opacity monitors that are control coupled for automatic combustion controls. These monitors are for operational control and are not for compliance purposes.

C. Application Classification

The application for Brooklawn does not include the licensing of increased emissions or the installation of new or modified equipment, therefore the license is considered to be a renewal of current licensed emission units only.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent best practical treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. BPT for Class IVA incinerators includes the following:

Operating temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1600°F with a stack gas retention time, at or above 1600°F, of at least 1.0 second.

To insure an efficient burn, and to prevent odors and visible emissions, the secondary chamber will be preheated, as specified by the manufacturer, until the pyrometer temperature measures a minimum of 1200°F.

The temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1600°F for the duration of the burn cycle.

A pyrometer and 1/4 inch test port shall be installed, operated, and maintained at that location of the incinerator or refractory lined stack which provides sufficient volume to insure a flue gas retention time of not less than 1.0 seconds at a minimum of 1600°F.

A log will be maintained recording the weight of the charge, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight of charge may be logged on the chart.

MEDEP Chapter 104 requires any Class IV incinerators having a designed maximum charging rate of 50 tons/day or less shall not exceed a particulate matter emission rate of 0.2 gr/dscf corrected to 12% CO₂ without the contribution of the CO₂ from the auxiliary fuel for a particulate standard. However, the BPT emission limit of 0.12 gr/dscf is more stringent and shall be used.

SO₂, NO_x, CO and VOC emissions for the incinerators were based on AP-42 emission factors for the combustion of Natural Gas.

Visible emissions for each incinerator shall not exceed 10% (excluding water vapor) on a six (6) minute block average basis, except for no more than two (2), six (6) minute block averages in a three hour period.

The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

C. Annual Emission Restrictions

Each incinerator shall not operate more than 2080 hours/year or, equivalently, the total operating time for all four incinerators shall not exceed 8320 hours/year. (12 month rolling total):

Total Allowable Annual Emissions for the Facility
(used to calculate the annual license fee)
Tons/Year

	<u>Pollutants</u>					
Emission Unit	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Unit 1	1.01	1.01	<0.01	0.16	0.14	0.01
Unit 2	1.01	1.01	<0.01	0.16	0.14	0.01
Unit 3	0.94	0.94	<0.01	0.31	0.26	0.02
Unit 4	0.94	0.94	<0.01	0.31	0.26	0.02
Total	3.90	3.90	0.01	0.94	0.80	0.06

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by-case basis. Based on total facility emissions, Brooklawn is below the emissions level required for modeling and ambient monitoring.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-48-71-I-R, subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department

- deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
 - (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
 - (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
 - (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 MRSA §353.
 - (6) The license does not convey any property rights of any sort, or any exclusive privilege.
 - (7) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
 - (8) The licensee shall maintain sufficient records, to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
 - (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for the renewal of a license or amendment shall not stay any condition of the license.

- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- a. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 2. pursuant to any other requirement of this license to perform stack testing.
 - b. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - c. submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- a. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - b. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - c. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

- (13) Notwithstanding any other provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon the written request of the Department, the licensee shall establish and maintain such records, make such reports, install, use, and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

Specific Conditions

- (16) Units 1 and 2 shall not exceed the maximum design combustion rate of 150 lbs per hour or the maximum feed rate of 300 lbs per batch. Auxiliary fuel input to the primary and secondary chamber shall not exceed 0.75 MMBtu/hr, and 0.85 MMBtu/hr respectively of natural gas. [MEDEP Chapter 115, BPT]
- (17) Units 3 and 4 shall not exceed the maximum design combustion rate of 200 lbs per hour or the maximum feed rate of 800 lbs per batch. Auxiliary fuel input to the primary and secondary chambers shall not exceed 1.5 MMBtu/hr each of natural gas. [MEDEP Chapter 115, BPT]
- (18) A log shall be maintained recording the weight of charge, preheating time, charging time, afterburner temperature directly after charging and every 60 minutes after startup until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight of charge may be logged on the chart. These records shall be kept on file for a minimum of six years and be made available to the Department upon request. [MEDEP Chapter 115, BPT]

- (19) The secondary chamber shall be preheated as specified by the manufacturer to a minimum of 1200°F prior to the burning of any remains and shall be maintained at a minimum of 1600°F during the duration of the burn. [MEDEP Chapter 115, BPT]
- (20) A pyrometer and 1/4 inch test port shall be installed, operated, and maintained at that location of the incinerator or refractory lined stack which provides sufficient volume to insure a flue gas retention time of not less than 1.0 seconds at a minimum of 1600°F. [MEDEP Chapter 115, BPT]
- (21) **Emission Limits** [MEDEP Chapter 115, BPT]

Brooklawn shall not exceed a particulate matter emission limit of 0.12 gr/dscf corrected to 12% CO₂ without the contribution of the CO₂ from the auxiliary fuel. Therefore, based on the maximum design combustion rate and continuous operation of the Class IV-A incinerators, emissions shall be limited to the following:

For Units 1 and 2, the licensed allowed emissions shall be limited to:

<u>Pollutant</u>	<u>gr/dscf</u>	<u>lb/hr</u>
PM	0.12	1.01
PM ₁₀	-	1.01
SO ₂	-	<0.01
NO _x	-	0.16
CO	-	0.13
VOC	-	0.01

For Units 3 and 4, the licensed allowed emissions shall be limited to:

<u>Pollutant</u>	<u>gr/dscf</u>	<u>lb/hr</u>
PM	0.12	0.94
PM ₁₀	-	0.94
SO ₂	-	<0.01
NO _x	-	0.29
CO	-	0.25
VOC	-	0.02

- (22) Each incinerator shall not operate more than 2080 hours/year or, equivalently, the total operating time for all four incinerators shall not exceed 8320 hours/year. [MEDEP Chapter 115, BPT]

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- (23) Visible emissions from Unit 1, 2, 3 and 4 shall not exceed an opacity limit of 10% (excluding water vapor) on a six (6) minute block average, except for no more than two (2), six (6) minute block averages in a three hour period. [MEDEP Chapter 101]
- (24) The combustion gases from Units 1 and 2 shall vent to a stack of at least 33 feet AGL. The combustion gases from Units 3 and 4 shall vent to a stack of at least 18.5 feet AGL. [MEDEP Chapter 115, BPT]
- (25) The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications, and shall be familiar with the terms of this Air Emission License as it pertains to the operation of the incinerator. [MEDEP Chapter 115, BPT]
- (26) Brooklawn shall pay the annual air emission license fee within 30 days of **November 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3. [MEDEP Chapter 115, BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

The term of this order shall be for five (5) years from the date of signature above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 11/6/2003

Date of application acceptance: 12/1/2003

Date filed with Board of Environmental Protection: _____

This order prepared by Jonathan Voisine, Bureau of Air Quality